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DEFENSE HEALTH CARE

Medical Surveillance
Improved Since Gulf
War, but Mixed Results
in Bosnia



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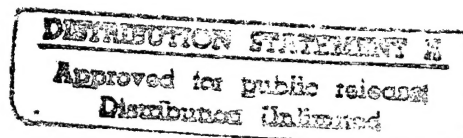
National Security and
International Affairs Division

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May 13, 1997

The Honorable Strom Thurmond
Chairman
The Honorable Carl Levin
Ranking Minority Member
Committee on Armed Services
United States Senate

The Honorable Floyd Spence
Chairman
The Honorable Ronald Dellums
Ranking Minority Member
Committee on National Security
House of Representatives



Approximately 697,000 military personnel served in the Persian Gulf from August 1990 to June 1991. Soon after redeploying from the Persian Gulf, many experienced health problems such as fatigue, muscle and joint pain, memory loss, and severe headaches. After over 30 studies, 18 public hearings conducted by the Presidential Advisory Committee on Gulf War Veterans' Illnesses, and significant Department of Defense (DOD) efforts, the nature and causes of these illnesses remain unclear. The Presidential Advisory Committee's final report concluded that many of the health concerns of Gulf War veterans may never be fully resolved because of a lack of data.

Concerned about the health data problem, Congress directed us to determine the extent to which the medical records for personnel who deployed to the Persian Gulf War are complete.¹ We found that, according to the DOD officials we interviewed, the Persian Gulf War medical records are widely recognized as incomplete and inaccurate in documenting all medical events for servicemembers while deployed to the Persian Gulf. Accordingly, as agreed with your Committees, we sought to determine what action, if any, DOD has taken to improve medical surveillance before, during, and after deployments, focusing especially on Operation Joint Endeavor, which was conducted in the countries of Bosnia-Herzegovina, Croatia, and Hungary.

To accomplish this objective, we interviewed officials and obtained pertinent documentary evidence from officials at the Office of the

¹National Defense Authorization Act for Fiscal Year 1997 (sec. 744).

Assistant Secretary of Defense for Health Affairs; the Joint Staff; the Offices of the Surgeons General at Army, Navy, and Air Force Headquarters in Washington, D.C.; and other responsible offices. We also (1) obtained information from the DOD Deployment Surveillance Team's database in Falls Church, Virginia, and (2) reviewed the medical records for active duty servicemembers in selected Army units in Germany who deployed to Operation Joint Endeavor. Appendix II describes, in more detail, the scope and methodology for this report.

Background

A military medical surveillance system that collects, analyzes, and disseminates health information facilitates DOD's ability to intervene in a timely manner to address health care problems experienced by military personnel. DOD believes such a system is one of the principal means to ensure a fit and healthy force and to prevent disease and injuries from degrading warfighting capabilities. Based on our review of the Presidential Advisory Committee and the Institute of Medicine reports² and discussions with DOD officials, for the purposes of this report we identified four major elements of a military medical surveillance system, as shown in table 1.

Table 1: Major Elements of a Military Medical Surveillance System

Deployment information	Environmental health threat assessment and disease monitoring	Medical assessments	Recordkeeping
Who deployed	Predeployment health threat assessment	Predeployment medical assessments	All servicemember health events in-theater and at home unit
Location in theater			
When they were there	Continuous in-theater monitoring of health threats	Postdeployment medical assessments	Predeployment and postdeployment medical assessments
	Monitoring of disease and nonbattle injuries	Centralized collection of medical assessment data	Use of investigational drugs

The Presidential Advisory Committee and the Institute of Medicine investigations into the causes of illnesses experienced by Gulf War

²Health Consequences of Service During the Persian Gulf War: Recommendations for Research and Information Systems, Institute of Medicine, Medical Follow-up Agency (Washington, D.C.: National Academy Press, 1996); Presidential Advisory Committee on Gulf War Veterans' Illnesses: Interim Report (Washington, D.C.: U.S. Government Printing Office, Feb. 1996); Presidential Advisory Committee on Gulf War Veterans' Illnesses: Final Report (Washington, D.C.: U.S. Government Printing Office, Dec. 1996).

veterans confirmed the need for effective medical surveillance capabilities. Research efforts to determine the causes of what has become known as veterans' Gulf War illnesses have been hampered due to incomplete medical surveillance data on (1) the names and locations of personnel deployed to the Persian Gulf, (2) exposure of personnel to environmental health hazards, (3) changes in the health status of personnel deployed in the theater, and (4) records of immunizations and other health services provided to the individuals while deployed. In essence, the data available were poorly suited to support epidemiological³ and health outcome studies related to veterans' Gulf War illnesses.

Results in Brief

DOD has initiated actions to improve its medical surveillance for deployments since the Gulf War. A joint medical surveillance policy, currently under development since late 1994, calls for a comprehensive DOD-wide medical surveillance capability to monitor and assess the effects of deployments on servicemembers' health. Provisions of the draft policy address the medical surveillance problems experienced during the Gulf War; however, its success in resolving the problems cannot be assessed until the directive and implementing instruction are finalized and applied to a deployment. DOD officials expect the policy to be finalized by September 1997. After the policy is issued, the services and responsible offices are to develop detailed implementing instructions.

DOD has also implemented two comprehensive medical surveillance plans—one for Operation Joint Endeavor in Bosnia-Herzegovina, Croatia, and Hungary and the other for the current deployment in Southwest Asia. These plans address the medical surveillance problems experienced during the Gulf War and specifically call for identifying servicemember deployment information, monitoring environmental health and disease threats, doing personnel medical assessments, maintaining a centralized collection of medical assessment data, and employing certain medical record-keeping requirements.

Recognizing that this is DOD's first attempt, its success in implementing the medical surveillance plan for Operation Joint Endeavor has been mixed. Although the plan provided for enhanced medical surveillance compared to the Gulf War, our review disclosed the following problems, all of which offer DOD and the services lessons to be learned as they continue to develop their medical surveillance capabilities:

³Epidemiology is the scientific study of the incidence, distribution, and control of disease in a population.

- Deployment information. The personnel database used for tracking which Air Force and Navy personnel were deployed is considered inaccurate by DOD personnel.
- Medical assessments. Many Army personnel who should have received postdeployment medical assessments did not receive them. Of 618 personnel in 12 selected Army units whose medical records we reviewed, 24 percent did not receive in-theater postdeployment medical assessments, 21 percent did not receive home station postdeployment medical assessments, and 32 percent did not receive a tuberculin test.

When postdeployment medical assessments are done, they are frequently done late. Personnel in the 12 selected Army units who received home station postdeployment medical assessments received them on average nearly 100 days after they left theater instead of within 30 days as required by the plan. Similarly, personnel receiving the tuberculin tests received them on average 142 days after they left theater. The tuberculin test was required to be done soon after 90 days of the servicemember's departure from the theater.

The centralized database for collecting both in-theater and home unit postdeployment medical assessments is incomplete for many Army personnel. The database omitted 12 percent of the in-theater medical assessments done and 52 percent of the home unit medical assessments done for the 618 servicemembers whose records we reviewed.

- Medical record-keeping. Many servicemembers' medical records we reviewed, maintained by medical units in Germany, were incomplete regarding in-theater postdeployment medical assessments done, medical servicemembers' visits during deployment, and documentation of personnel receiving the tick-borne encephalitis vaccine.

DOD's Draft Joint Medical Surveillance Policy

For over 2 years, DOD officials have been working to develop a DOD-wide joint medical surveillance directive and instruction that establish policy and assign responsibility for improving DOD's medical surveillance for deployments. The intent of the policy is to expand the concept of medical surveillance during deployments to a more comprehensive approach for monitoring and assessing the health consequences related to servicemembers' participation in deployments.

We reviewed this draft policy and found that it addresses the types of medical surveillance problems experienced during the Gulf War—the lack

of personnel deployment information and medical assessments, the failure to monitor environmental and disease health threats, and the failure to meet record-keeping requirements. Specifically, the draft policy instruction assigns responsibilities as follows:

- Assigns to the Defense Manpower Data Center (DMDC) the responsibility for collecting and maintaining information, available for dissemination on a daily basis, on each servicemember deployed to a theater, the length of time the servicemember was deployed, and the exact location within the theater of that member's unit.
- Specifies that the Commander in Chief (CINC) and the Joint Task Force (JTF) Surgeon deploy technically specialized units with the capability and expertise required to identify infectious and environmental diseases, make health hazard assessments, and do advanced diagnostic testing.
- Requires the military services and the CINCS to conduct predeployment medical assessments, to include assessing mental health and drawing blood samples.
- Requires the CINC Surgeon and the JTF Surgeon to conduct postdeployment medical assessments at the time of redeployment or within 30 days of final departure, to include assessing mental health and drawing blood samples. For both the predeployment and the postdeployment medical assessments, the policy calls for the assessment forms to be forwarded to a single office within DOD for centralized collection purposes and to allow future analyses.
- Directs the CINC Surgeon and the JTF Surgeon to ensure that medical records are accurately kept and health-related events are documented during deployment. Specifically suggested are records of predeployment and postdeployment assessments and all health interventions (which would include all immunizations).

The draft directive and implementing instruction are currently under review by various offices within DOD. DOD officials expect the directive and instruction to be issued by September 1997. The responsible offices are required to develop the necessary implementing documents within 180 days of the directive's effective date.

DOD's Implementation of a Medical Surveillance Plan in Operation Joint Endeavor

While DOD was still developing its joint medical surveillance policy for deployments, the Assistant Secretary of Defense for Health Affairs issued, in January 1996, a medical surveillance plan for U.S. forces deploying to Bosnia-Herzegovina, Croatia, and Hungary under Operation Joint Endeavor. This medical surveillance plan encompassed the concepts under consideration in the draft joint policy, was developed by a triservice working group, and was coordinated by the Joint Staff with the services. It was designed to reflect the lessons learned from the Gulf War and to address the potential health risks in the Bosnian theater. According to DOD officials, this DOD-wide, centrally managed medical surveillance plan was the first DOD had developed for a deployment of U.S. forces. The strategy for implementing the plan was determined by the service Surgeons General, the Joint Staff, and the European Command Surgeon.

Using the four major elements of a military medical surveillance system described earlier, we examined DOD's and the services' implementation of the Operation Joint Endeavor medical surveillance plan.

Identifying Deployed Servicemembers and Tracking Their Movements in Theater

The ability to identify the population at risk is an essential part of an effective military medical surveillance system. It is important to know which servicemembers deployed to the theater and where they were located within the theater during the deployment. This information is needed to facilitate monitoring and analysis of how changes in the servicemembers' health status is related to various environmental, biological, chemical, or other health threats. Our review indicated that DOD continues to experience problems with its capability to track the population at risk during deployments.

In researching the Persian Gulf War illnesses, the Institute of Medicine and the Presidential Advisory Committee reported that inaccurate information on the location of servicemembers in the theater presented problems in identifying exposures to various health threats. Both recommended that DOD improve its ability to track the location of units in the theater. DOD established systems to identify the location of units during the Gulf War; however, the research groups reported that their use for epidemiological studies was limited because the systems did not provide information at the individual servicemember level. During the Gulf War, servicemembers frequently did not remain with their units.

DOD established a system, used in Operation Joint Endeavor, to identify which servicemembers deployed to the theater. The services are required

to supply deployment data to the DMDC in Monterey, California, which is responsible for maintaining a database on those servicemembers who are deployed.

In determining the extent to which the services had done the required postdeployment medical assessments, we used the Army's deployment data and did not find any errors about which servicemembers had deployed.⁴ However, DOD officials expressed their concerns about the accuracy of the deployment database for Air Force and Navy personnel. Air Force officials told us that the Air Force had supplied information to DMDC on servicemembers it planned to deploy. These servicemembers were added to the DMDC database, but many never actually deployed. We were also told that the Navy's personnel deployment data were inaccurate because elements of two construction battalions (at least 200 servicemembers) that deployed to Operation Joint Endeavor do not appear in the DMDC database. DOD officials told us that they have also frequently heard concerns about the accuracy of the deployment database and met in mid-March 1997 with representatives from the services, DMDC, and other offices to discuss ways to correct the problems.

While the DMDC database provides information on which units and which personnel within those units deploy to a theater, DOD has not yet developed a system for accurately tracking the movement of individual servicemembers in units within the theater. This capability is important for accurately identifying exposures of servicemembers to health hazards in the theater.

Capability to Assess and Test for Health Hazards and Monitor Their Occurrence During Deployments

A military medical surveillance program should contain mechanisms for identifying the potential health and environmental hazards that deploying troops will encounter in the theater. Such information can then be used to develop effective preventive countermeasures and identify those exposed to these threats. During the Gulf War, DOD did little prospective monitoring of environmental health threats in the theater and had no systematic means of tracking and centrally reporting the occurrence of diseases and nonbattle injuries during the war.

Environmental Health Threat Assessments

In its 1996 report, the Institute of Medicine recommended that, in preparing for deployments, DOD should monitor the environment for possible health threats and prepare for rapid response and investigation

⁴While we did not find any instances where Army servicemembers shown in the deployment database as deploying under Operation Joint Endeavor did not, in fact, deploy, we did not examine whether additional servicemembers may have deployed who were not included in the deployment database.

and collect accurate data on exposures to those threats in the theater of operations.

Prior to deployments, DOD identifies diseases/illnesses common to the environment in the theater and informs medical personnel and deploying troops on ways to avoid or protect themselves from these diseases/illnesses. According to DOD officials, a predeployment assessment of potential health hazards in the Operation Joint Endeavor theater indicated that diseases such as tick-borne encephalitis, hemorrhagic fever, typhus, and lyme disease could be problems. A tick-borne encephalitis vaccine was offered to those military personnel who might be in danger of contracting the disease because of their proximity to ticks. In addition, troops were advised on ways to best protect themselves from the other diseases, and medical personnel were instructed to be particularly alert for symptoms that might indicate that a servicemember had one of the diseases/conditions. Of the potential diseases/illnesses identified, only one case of hemorrhagic fever was diagnosed, and the patient was successfully treated.

The establishment in 1994 of the U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) has been a major enhancement to DOD's ability to perform environmental monitoring and tracking since the Gulf War. This capability was augmented in October 1995 with the establishment of the 520th Theater Army Medical Laboratory. This laboratory is a deployable public health laboratory that can provide environmental sampling and analysis in theater. The sampling results can then be used to determine what specific preventive measures and safeguards should be taken to protect troops from harmful exposures and to develop procedures to treat anyone exposed to health hazards.

Early in the planning for Operation Joint Endeavor, the Armed Forces Medical Intelligence Center identified potential environmental health threats in Bosnia-Herzegovina as coming primarily from exposures to air, water, and soils contaminated by hazardous industrial waste. In recognition of these potential threats, the Army laboratory was sent to Bosnia-Herzegovina to assist deployed preventive medicine units and to monitor environmental health hazards. While the laboratory was preparing for the mission, USACHPPM deployed an advance monitoring team to the theater in January 1996 to begin sampling the soil and water in the Tuzla area, where most of the U.S. forces were to be located. The laboratory arrived on-site in February 1996 and began conducting more extensive air, water, soil, and other environmental monitoring. In June 1996, USACHPPM

augmented the laboratory's efforts with additional air monitoring stations at nine regional locations in the theater where troops were concentrated. Through January 14, 1997, 2,564 air, water, and soil samples were taken, from which more than 112,000 reportable analyses were done. The results of the sampling indicated that no significant health risks were posed from the water, air, or soil in the theater but that prudent field sanitation measures should be taken.

The information USACHPPM obtains through its air, soil, and water sampling is entered into a database, which is then linked with DMDC's information on the units deployed to the theater. Using mapping data obtained from the National Imaging and Mapping Agency, USACHPPM analysts can then identify which units, if any, are in the most danger of exposure to environmental contaminants. Using this method, which was developed in response to the Gulf War oil fires, and which USACHPPM refers to as its Geographical Information System, DOD can calculate the degree of risk to specific units at specific theater locations and recommend preventive actions, as necessary. Also, on a retrospective basis, USACHPPM can also identify which units in the theater might have been exposed to other types of health threats, such as chemical, biological, or contagious disease threats. However, the troop location information is available only down to the unit level; information on specific locations of individuals within given units is still not available.

Monitoring of Diseases and Nonbattle Injuries

During the Gulf War, DOD did not systematically track, monitor, and report the types and numbers of diseases and nonbattle injuries experienced by servicemembers. Recognizing that such information would be useful, DOD's Joint Staff mandated in January 1993 that weekly reports on the rates of diseases and nonbattle injuries be provided to appropriate commanders during all deployments. This is being done during Operation Joint Endeavor. A major purpose of the program is to detect diseases and nonbattle injuries before they become major outbreaks and thereby limit the services' capabilities to carry out their missions.

The weekly reports are categorized into 15 different areas such as respiratory problems, orthopedic injuries, and unexplained fevers. Miscellaneous/administrative visits can also be reported to track immunizations, prescription refills, physical examinations, laboratory tests, and follow-up visits. The data are summarized into theater-wide illness and injury trends so that preventive measures can be identified and forwarded to appropriate theater/field commanders to alert them to any abnormal trends or to actions that should be taken.

DOD officials believe the predeployment assessment of environmental health hazards, the environmental sampling, and the medical surveillance monitoring done during Operation Joint Endeavor have enabled better tracking and medical troop surveillance than that available during the Gulf War. In addition, they believe the capabilities now available through USACHPPM and the Army laboratory, capabilities that were not available during the Gulf War, have greatly improved DOD's ability to monitor and track environmental threats and exposures.

Ability to Identify Changes in Servicemembers' Health Status During Deployment

Military medical surveillance should include the identification of changes in the health status of servicemembers during and after a deployment. Baseline information on the status of servicemembers' health before they deploy is highly desirable in determining whether their health status changed during a deployment. Predeployment and postdeployment medical assessments, including blood samples, provide for a comparison from which postdeployment epidemiological analyses can be done. Collecting and maintaining a centralized database of such medical assessment data also facilitate such analyses.

During the Gulf War, the absence of data on servicemembers' health, including both baseline health information and postdeployment health status information, greatly complicated the epidemiological research done by the Institute of Medicine and the Presidential Advisory Committee following the war.

Predeployment Medical Assessments

DOD's medical surveillance plan did not require the collection of baseline health status information on servicemembers who deployed during Operation Joint Endeavor. Rather, the services were required to follow their existing service requirements for ensuring that all personnel were medically fit for deployment.

Initially, in developing the medical surveillance plan, DOD officials considered collecting a predeployment blood sample for all deploying servicemembers. However, this approach was not followed, according to DOD officials, because (1) DOD already had blood samples that had been drawn during the services' periodic testing for the Human Immuno-deficiency Virus (HIV), (2) many servicemembers had already deployed when the collection was being discussed, and (3) the collection of blood samples would have been logistically difficult. DOD officials considered the blood samples drawn for the HIV testing to be acceptable baseline samples.

Our review, however, found that predeployment blood samples were not available for many servicemembers who deployed under Operation Joint Endeavor and that many of the blood samples, in the repository for servicemembers who deployed, were quite old. More specifically, data from USACHPPM, which oversees the blood repository, show that predeployment blood samples are not available for 2,476 (9.3 percent) of the 26,621 servicemembers who had deployed to Bosnia-Herzegovina as of March 12, 1996. Also, the data show that the last blood samples for 9,266 (38.4 percent) of the 24,145 predeployment blood samples were more than 24 months old. Moreover, the data show that the last blood samples for 1,544 (6.4 percent) of the predeployment blood samples were more than 5 years old. DOD's draft medical surveillance policy requires a new blood sample to be drawn prior to a servicemember's deployment when the last blood sample is over a year old. Therefore, the age of these blood samples raises questions as to their reliability as predeployment baseline samples.

Postdeployment Medical Assessments

Postdeployment medical assessments were required for servicemembers who deployed to Bosnia-Herzegovina, Croatia, and Hungary. However, based on our review of documentation in both the Deployment Surveillance Team's database and the servicemembers' medical records we reviewed, we concluded that the required assessments were not done for many Army personnel. Moreover, in those instances where postdeployment medical assessments were done, they were done much later than required.

For those deployed under Operation Joint Endeavor, two postdeployment medical assessments were to be done—one assessment was to be done in theater shortly before the servicemembers redeployed to their home station and the other at the home station within 30 days of leaving the theater. The assessments consist of the servicemember's responses to a series of questions to be answered by the servicemember covering the member's general health status. After completion by the servicemember, a health care provider was required to review the responses to the questions and refer the servicemember for further evaluation, if appropriate. At the time of the in-theater postdeployment medical assessment, medical personnel were required to collect a blood sample and send it to the central blood repository in the United States. If this blood sample was not collected during the in-theater postdeployment medical assessment process, it was to be collected at the time of the home unit postdeployment medical assessment. Postdeployment requirements also included administering a battery of mental health questionnaires designed to identify servicemembers needing further psychological evaluation.

Tuberculin skin tests were also required at the servicemembers' home stations soon after 90 days of departure from the theater. Tuberculosis was considered a potential health threat in the theater.

Our review of the Deployment Surveillance Team's database for the 6,624 Army personnel in our universe requiring medical assessments indicated that 43 percent of the personnel had not received the required in-theater postdeployment medical assessment, 82 percent had not received the home unit postdeployment medical assessment, and 41 percent did not have a postdeployment blood sample drawn.⁵ Only 429 (6.5 percent) servicemembers met all three requirements—the in-theater and home unit postdeployment medical assessments and a postdeployment blood sample drawn and in storage. We also found that 1,889 (28.5 percent) had not met any of the three requirements. The Deployment Surveillance Team's database does not collect information on the extent to which the tuberculin tests are done at the home unit.

During our review of the medical documentation for 618 servicemembers in 12 selected Army units requiring postdeployment medical assessments, we found no evidence that the required medical assessments were conducted for many servicemembers.⁶ More specifically, as shown in table 2, about 24 percent did not receive the in-theater postdeployment medical assessment, 21 percent did not receive the home unit postdeployment medical assessment, 34 percent did not have a postdeployment blood sample drawn, and 32 percent did not receive the required tuberculin test.

⁵The Deployment Surveillance Team's database may understate the extent to which the in-theater and home unit postdeployment medical assessments were conducted based on the results of our review of medical records for selected Army units.

⁶Documentation reviewed included data in both the Deployment Surveillance Team database and the servicemember's permanent medical record. Our analysis reflects the existence of in-theater and home unit postdeployment medical assessments in either the Deployment Surveillance Team database or the servicemembers' medical records.

Table 2: Medical Assessments for Selected Army Units (as of Feb. 6, 1997)

Unit	Records reviewed	No in-theater medical assessment	No home unit medical assessment	No blood sample drawn	No tuberculin test
A	63	12	27	11	42
B	80	9	13	10	14
C	66	58	10	59	16
D	36	7	11	12	9
E	49	5	16	25	17
F	48	14	4	33	4
G	43	7	1	7	12
H	55	6	17	1	37
I	46	4	6	4	17
J	52	4	6	12	11
K	48	12	13	13	15
L	32	7	3	22	3
Total	618	145	127	209	197
Percentage		23.5	20.6	33.8	31.9

Of the 618 servicemembers whose medical records we reviewed, only 206, or one-third, had met all four requirements—the in-theater medical assessment, the home unit medical assessment, the tuberculin test, and a postdeployment blood sample drawn. Conversely, 20 (about 3 percent) of the 618 servicemembers had not met any of the four requirements.

Different reasons were cited for lack of (1) in-theater medical assessments and (2) unit medical assessments and the tuberculin tests conducted at the home unit. According to Army medical officials in Germany, the in-theater problem was due to the lack of a centralized out-processing mechanism for redeploying personnel; whereas the home unit problem was due to unit commanders not giving enough emphasis to the medical assessment requirements. More specifically, the U.S. Army Europe (USAREUR) Surgeon attributed the lack of in-theater medical assessments for Army personnel redeploying to their home units before August 1996 to the lack of a fully functioning central out-processing point for redeploying personnel to ensure that they received the required assessments. Beginning in August 1996, all Army personnel redeploying to their home unit from Bosnia-Herzegovina, Croatia, and Hungary were required to go through an intermediate staging base in Hungary, where medical assessments were done. For redeployments, the USAREUR Surgeon believes that compliance with the requirement for in-theater medical assessments would be higher

after the staging base became operational. We did not validate whether these improvements, in fact, occurred.

Officials with several medical units responsible for the Army units we reviewed told us that they have no direct authority over the unit personnel to require them to obtain the postdeployment medical assessments or tuberculin tests. They must rely on unit commanders to require their personnel to go to the medical clinic for the assessments.

Further, home unit medical assessments and the tuberculin test, when done, were frequently done much later than required. The home unit postdeployment medical assessments are required to be conducted within 30 days of servicemembers' departure from the theater. The 30-day time frame was established to ensure that the required medical assessments are done soon after servicemembers return to their home unit and, from an epidemiological standpoint, if medical problems exist, to be better able to associate the medical problems to the members' service while deployed. As shown in table 3, most of the home unit medical assessments that were completed for the selected 12 Army units were done much later than the 30 days required—averaging 98 days following departure from the theater. Similarly, the tuberculin tests, required to be done soon after 90 days of the members' departure from the theater, if done, were done later—an average of 142 days.

Table 3: Timeliness (average days from departure from theater) for the Army's Home Unit Postdeployment Medical Assessments and Tuberculin Tests for Selected Army Units

Unit	Average days	
	Home unit medical assessment (30-day requirement)	Tuberculin test (90-day requirement)
A	178.8	173.9
B	95.1	109.0
C	212.0	236.9
D	76.8	113.6
E	33.9	131.2
F	58.9	133.6
G	11.4	104.5
H	48.1	125.0
I	17.3	106.9
J	85.0	123.3
K	178.8	159.2
L	169.2	166.1
Average for all units	98.6	142.0

Such delays in doing the home unit medical assessments, particularly if the assessment also involves the drawing of a postdeployment blood sample, pose concerns regarding epidemiological analyses. With such delays, it is much more difficult to isolate which health problems were attributable to members' service during deployments and which were contracted after their return to home stations. Also, the delay in doing the assessments could delay the referral of the servicemember for further evaluation and treatment based on this medical assessment.

Our review of medical records may have resulted in more medical assessments being done than would otherwise have occurred. In fact, we were told that our planned review of medical records in Germany, which was announced in December 1996, encouraged certain units to complete their home unit postdeployment medical assessments and tuberculin tests in anticipation of our arrival. Four of the 12 units (units A, C, K, and L) completed over 80 percent of the required home unit postdeployment medical assessments and tuberculin tests in January and February 1997, even though the servicemembers had returned to their home units 5 to 8 months earlier. This delay explains much of the timeliness problems experienced by these units discussed earlier. As shown in table 4, the percentage of Army personnel who did not have the home unit postdeployment medical assessment and the tuberculin test was much higher as of December 31, 1996, before our medical records review—increasing from 20.6 percent to 44.5 percent for home unit postdeployment medical assessments and from 31.9 percent to 58.7 percent for tuberculin tests.

Table 4: Medical Assessments for Selected Army Units (as of Dec. 31, 1996)

Unit	Records reviewed	No home unit medical assessment	No tuberculin test
A	63	57	50
B	80	13	14
C	66	51	59
D	36	11	12
E	49	16	46
F	48	8	20
G	43	1	13
H	55	17	37
I	46	6	17
J	52	15	26
K	48	48	39
L	32	32	30
Total	618	275	363
Percentage		44.5	58.7

Centralized Collection of Assessment Data

A complete and accurate database is needed to effectively monitor the extent to which required medical assessments are done. The medical surveillance plan includes provisions for the centralized collection and maintenance of a database for the in-theater and home unit postdeployment medical assessments done for servicemembers deployed under Operation Joint Endeavor. The medical units processing the in-theater and home unit medical assessments are required to send copies of the assessment forms to DOD's Deployment Surveillance Team. The team uses the data to prepare statistical reports on how well the medical assessment program is being implemented.

We tested the completeness of the surveillance team's centralized database for the in-theater and home unit postdeployment medical assessments conducted for the 618 servicemembers whose medical records we reviewed. We found that the database was incomplete for both assessments—understating considerably the number of home unit medical assessments done. More specifically, the database omitted 57 (12 percent) of the 473 in-theater medical assessments done and 174 (52 percent) of the

332 home unit medical assessments done for the 618 service members whose medical records we reviewed.⁷

Complete and Accurate Medical Records

Complete and accurate medical records documenting all medical care for the individual servicemember are essential for the delivery of high quality medical care. They are also important for epidemiological analyses following military deployments.

The Presidential Advisory Committee and the Institute of Medicine reported problems concerning the completeness and accuracy of medical record-keeping during the Gulf War. During the Gulf War, interactions between the deployed forces and medical care providers in the theater were frequently not recorded in servicemembers' permanent medical records. This problem was particularly common for immunizations given in the theater. The Institute of Medicine characterized DOD's and the Department of Veterans Affairs' medical records systems as fragmented, disorganized, and incomplete.

Under the Operation Joint Endeavor medical surveillance plan, postdeployment in-theater and home unit medical assessment forms are required to be included in servicemembers' permanent medical records. Similarly, Army regulations require documentation in servicemembers' permanent medical records of all immunizations received in theater and visits made by servicemembers to health units such as battalion aid stations.⁸ Because the tick-borne encephalitis vaccine is classified by the Food and Drug Administration as an investigational drug, specific requirements apply for documenting its use in servicemembers' medical records.

We tested the completeness of the permanent medical records for selected Army active duty servicemembers who had deployed under Operation Joint Endeavor. Our review disclosed that many of the medical records were incomplete regarding documentation reflecting that (1) in-theater medical assessments were conducted, (2) servicemembers had received the tick-borne encephalitis vaccine, and (3) visits had been made by

⁷Our analyses reflected the completeness of the database as of January 21, 1997, for in-theater medical assessments completed before September 1, 1996, and for home unit medical assessments completed before December 1, 1996. This provided a minimum of almost 2 months for the medical assessment forms to be sent from Germany and incorporated into the Deployment Surveillance Team's database.

⁸A battalion aid station, which is integral to all combat battalions, provides forward battlefield medical care such as immediate emergency treatment, evacuation and clinical stabilization of sick and injured servicemembers, and routine outpatient medical care.

servicemembers to battalion aid stations. All of these documentation problems pertain to medical care in the theater.

Regarding postdeployment medical assessments, we found that 91 (19 percent) of the 473 servicemembers with a postdeployment in-theater medical assessment and 9 (1.8 percent) of the 491 servicemembers with a postdeployment home unit medical assessment did not have the assessments documented in their medical records.

USAREUR Surgeon officials attributed these documentation problems to the practice of allowing servicemembers to hand-carry the in-theater assessment forms to their home unit for insertion to their permanent medical records. The officials said the assessment forms were frequently lost. We noted that such documentation problems occurred less frequently for the home unit medical assessments because they were done at the home unit and as such did not need to be forwarded from the theater to the servicemembers' home units.

During the deployment to Bosnia, servicemembers deploying to regions with a threat of tick-borne encephalitis were given the choice of being vaccinated with an investigational drug vaccine.⁹ To determine whether the medical records included documentation of servicemembers receiving the vaccine, we obtained a list from the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID)¹⁰ of servicemembers that received the vaccine and reviewed 588 medical records of servicemembers in selected Army units shown as having received the vaccine. As shown in table 5, 141 (24 percent) of these servicemembers' permanent medical records did not document the vaccinations.

⁹An investigational drug is a new drug, antibiotic drug, or biological drug or product that has not been licensed by the Food and Drug Administration for general use in the United States. As such, the Food and Drug Administration regulates its use.

¹⁰USAMRIID maintains a list of servicemembers that received the tick-borne encephalitis vaccine.

Table 5: Documentation of Tick-Borne Encephalitis Vaccinations in Servicemembers' Permanent Medical Records

Unit	Number taking the vaccine per USAMRIID	No documentation in medical records	Percentage not in medical records
I	96	29	30.2
M	55	19	34.6
N	135	22	16.3
O	176	7	4.0
P	126	64	50.8
Total	588	141	24.0

To test the completeness of the permanent medical records for visits made to battalion aid stations by servicemembers while deployed to Bosnia-Herzegovina during Operation Joint Endeavor, we selected 50 entries from the sign-in logs for three battalion aid stations and reviewed those members' medical records for documentation of the visit. As shown in table 6, about 29 percent of the battalion aid station visits were not documented in the members' permanent medical records.

Table 6: Documentation of Battalion Aid Station Visits in Permanent Medical Records

Unit	Number of battalion aid station visits reviewed	No documentation in medical records	Percentage not in medical records
F	50	12	24.0
M	50	20	40.0
N	50	12	24.0
Total	150	44	29.3

Army medical officials pointed out that servicemembers had deployed to the theater only with an abstract of their permanent medical records and that any medical documentation generated in the theater should have been routed back to the servicemembers' home units for inclusion in their medical records, but in many instances, this did not occur. They also mentioned that permanent medical records are still essentially kept in a paper-based system and are therefore subject to having information misfiled or lost.

To address medical documentation problems, the Presidential Advisory Committee recommended that DOD direct its attention toward computerizing its theater medical records. An Assistant Surgeon General of the Army also told us that he believes the solution to such documentation problems is the development of a deployable computerized

patient record. DOD has a project underway with the goal to have a paperless, filmless computerized medical record for every servicemember, while on active duty, by fiscal year 2000. Further objectives of the project are to standardize medical record-keeping DOD-wide; ensure that medical record information is complete, accurate, and available when needed; and prevent active duty members with disqualifying conditions from being deployed. In addition, plans call for the computerized medical record to document and update the baseline health status of each active duty member, support the recognition of deployment-related illnesses, and provide a mechanism for reporting the medical readiness of the active duty force.

Recognizing that DOD's paper-based medical records are not sufficient to support the growing interest in epidemiology driven by the Gulf War experience, the project officials recommended the development of some type of electronic mechanism to capture health service data for each active duty member at all echelons of care during military operations. Several options for obtaining and recording the necessary information are being considered, but the basic concept involves providing each servicemember with a computerized card or tag that can receive and store computerized health information. When the member reports to a medical unit for care, the card can be updated with the member's complaint, diagnosis, and treatment (including X-rays). This information would be collected by computer and reported to a central location by the medical unit to allow for overall summarization of medical problems and treatments in a given theater.

Long-term recommendations of project officials call for deploying a triservice computerized patient record throughout DOD by fiscal year 2000. Also recommended is the establishment of linkages to external systems through the inclusion of a global positioning history for each individual. Such a record could support the geographical location history developed and being refined by USACHPPM and assist in prospective or retrospective data analysis of factors such as chemical/biological risk exposures to specific troops in the theater.

DOD's Implementation of a Medical Surveillance Plan in Southwest Asia

In December 1996, the CINC, U.S. Central Command, issued guidance that included medical surveillance requirements for all forces deployed in Southwest Asia. This guidance is similar to the medical surveillance plan for Operation Joint Endeavor. While implementation of the medical surveillance plan for Southwest Asia began only recently in January 1997, a Joint Staff official told us the plan is being implemented. The official said that an epidemiology team and the Navy's forward medical laboratory were deployed to the theater to provide on-site medical surveillance. In addition, the official said that predeployment and postdeployment medical assessments are being conducted for the servicemembers in the Southwest Asia theater. We did not test, however, the services' implementation of the Southwest Asia medical surveillance requirements.

DOD officials told us that they delayed issuing a specific medical surveillance plan for Southwest Asia because DOD was developing a joint medical surveillance policy that would cover such deployments. However, when the time required to develop a joint policy took longer than expected, the Joint Staff encouraged the CINC (U.S. Central Command) to issue specific medical surveillance requirements for the deployment.

Prior to the issuance of the December 1996 guidance, DOD had conducted some medical surveillance activities, including environmental sampling, in the Southwest Asia theater but had not required medical assessments and postdeployment blood samples for servicemembers deployed there. We believe that the delay in requiring medical assessments and postdeployment blood samples raises concerns, given that U.S. forces have been deployed to this region continuously since the end of the Gulf War and many veterans who served in this region began to complain of medical problems soon after the end of the conflict.

Conclusions and Recommendations

Overall, DOD has taken initiatives to overcome the medical surveillance problems experienced during the Gulf War. It is evident that positive steps have been taken to establish a joint policy that will emphasize the importance of medical surveillance and provide for a more uniform approach for doing such surveillance in future deployments. DOD's recent experience in Operation Joint Endeavor, during which it tried to institute corrective policies and processes to overcome problems experienced during the Gulf War, provides lessons learned that DOD can apply in its ongoing efforts to develop a DOD-wide joint medical surveillance policy. However, the joint policy has been under development for over 2 years.

Some of the problems we found in implementing the medical surveillance during Operation Joint Endeavor—the failure to assess all servicemembers' health in theater and after return to their home units and to consistently document medical care provided in theater—raise serious questions about DOD's ability to effectively implement medical surveillance policies during another high-conflict deployment like the Gulf War. We recognize that complete record-keeping may be more difficult during times of high intensity combat activities; however, complete record-keeping is still necessary for an effective medical surveillance system.

In light of the problems discussed in this report, we recommend that the Secretary of Defense direct the Assistant Secretary of Defense for Health Affairs, along with the military services, the Joint Chiefs of Staff, and the Unified Commands, as appropriate, to

- complete expeditiously and implement a DOD-wide policy on medical surveillance for all major deployments of U.S. forces, using lessons learned during Operation Joint Endeavor and the Gulf War;
- develop procedures to ensure that medical surveillance policies are implemented to include emphasizing (a) the need for unit commanders to ensure that all servicemembers receive the required medical assessments in a timely manner and (b) the need for medical personnel to maintain complete and accurate medical records; and
- develop procedures for providing accurate and complete medical assessment information to the centralized database.

We also recommend that the Secretary of Defense direct the Deputy Under Secretary of Defense for Requirements and Resources to investigate the completeness of information in the DMDC personnel deployment database and take corrective actions to ensure that the deployment information is accurate for servicemembers who deploy to a theater.

Agency Comments and Our Evaluation

In commenting on a draft of this report, DOD agreed with the accuracy of the report. It agreed that substantial improvements in medical surveillance and record-keeping were needed based on the Gulf War experience and that some improvements in these areas were applied in the deployment to Bosnia. Likewise, DOD stated that it will apply the lessons from the Bosnia deployment to refine its policy for future medical surveillance during deployments.

DOD concurred with each of our four recommendations and stated that with the support of the services, the Chairman of the Joint Chiefs of Staff, and the intelligence community, it will aggressively work to continue to make improvements. For example, DOD stated that, in August 1997, it will disseminate the DOD instruction and directive establishing a DOD-wide policy on medical surveillance. DOD also indicated that it has reviewed its master personnel database deficiencies and developed recommendations to improve its ability to maintain accurate information on servicemembers who deploy. DOD indicated that on February 10, 1997, a message was sent to all unified commanders reemphasizing the importance of a comprehensive medical surveillance program to ensure force readiness and sustainment. DOD noted that it has standardized predeployment and postdeployment questionnaires and has started an automation initiative to enhance accuracy of the centralized database.

We believe these initiatives, if properly implemented, could greatly enhance the medical surveillance program. However, DOD's response did not indicate what its specific procedures will be for institutionalizing these efforts to ensure that all medical surveillance requirements will be met. For example, further procedural improvements would be needed to routinely monitor units' compliance with the medical surveillance requirements and periodically evaluate the accuracy and completeness of the centralized database.

DOD's comments are presented in appendix II.

We are sending copies of this report to the Chairmen and Ranking Minority Members, Senate and House Committees on Appropriations; the Secretaries of Defense, the Army, the Navy, and the Air Force; and the Chairman, Joint Chiefs of Staff. Copies will also be made available to others upon request.

Please contact me at (202) 512-5140 if you or your staff have any questions concerning this report. Major contributors to this report are listed in appendix III.



Mark E. Gebicke
Director, Military Operations
and Capabilities Issues

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Abbreviations

CINC	Commander in Chief
DMDC	Defense Manpower Data Center
DOD	Department of Defense
HIV	Human Immuno-deficiency Virus
JTF	Joint Task Force
USACHPPM	U.S. Army Center for Health Promotion and Preventive Medicine
USAMRIID	U.S. Army Medical Research Institute of Infectious Diseases
USAREUR	U.S. Army Europe

Scope and Methodology

For this report, we interviewed officials and obtained pertinent documentary evidence from officials at the Office of the Assistant Secretary of Defense for Health Affairs; the Joint Staff; and the Offices of the Surgeons General at Army, Navy, and Air Force Headquarters in Washington, D.C. We also interviewed and obtained documents from officials at the Department of Defense's (DOD) Deployment Surveillance Team and the Persian Gulf Illness Investigation Team at Falls Church, Virginia, and from the U.S. Army Center for Health Promotion and Preventive Medicine at Aberdeen Proving Ground, Maryland; the Institute of Medicine's Medical Follow-up Agency; the Presidential Advisory Committee on Gulf War Veterans' Illnesses; the Defense Manpower Data Center in Monterey, California; the U.S. European Command Surgeon's Office; the U.S. Army Europe Surgeon's Office; and the U.S. Air Force Europe Surgeon's Office.

To assess the extent to which the required medical assessments, described above, were conducted, we (1) obtained information from the DOD Deployment Surveillance Team's database in Falls Church, Virginia, and (2) reviewed the medical records for active duty servicemembers in 12 selected Army units in Germany who deployed to Operation Joint Endeavor.

To determine the overall status of DOD's efforts to implement its Operation Joint Endeavor medical surveillance policy, in January 1997, we requested the Deployment Surveillance Team to provide us with information from its database showing those servicemembers in units who deployed to and spent at least 30 days in the countries of Bosnia-Herzegovina, Croatia, and Hungary from the start of Operation Joint Endeavor and had returned to their home units by August 31, 1996. The cutoff date was selected to provide sufficient time for units to forward in-theater and home unit assessment forms and blood samples to the United States and have that information entered into the team's database. The team then extracted data from its database showing which of these servicemembers had received the required assessments and had a postdeployment blood sample in storage at the central blood repository. This information showed each service's overall compliance with the Operation Joint Endeavor medical surveillance assessment requirements.

After obtaining this information, we decided to limit our review of servicemembers' medical records to selected Army units because the Army is the largest participant of the services in Operation Joint Endeavor. To select the Army units from which we would review servicemembers'

medical records, we requested the Deployment Surveillance Team to sort the deployment data we had requested by unit, rank-ordered by the units with the largest number of personnel requiring postdeployment medical assessments, without regard to the unit's rate of compliance with the requirements. We then selected the 12 units in Germany with the largest numbers of personnel requiring medical assessments. These selected units provided a range of different types of units and were located in multiple locations in central Germany. At the responsible medical unit for the selected units, we requested the medical records for those servicemembers on the Deployment Surveillance Team list who required medical assessments to be done. We reviewed the medical records for those servicemembers who were still in the unit and whose medical records were not currently in use by the medical unit at the time of our review. In reviewing these 618 medical records, we determined whether the record included an (1) in-theater medical assessment form, (2) the home unit medical assessment form, and (3) documentation that the required tuberculin test had been done.

To determine whether servicemembers who had received the tick-borne encephalitis vaccine had this documented in their medical records, we obtained a list from the U.S. Army Medical Research Institute of Infectious Diseases of all servicemembers who had received one or more doses of the vaccine in units who deployed during Operation Joint Endeavor. From this list, we selected five units located in Germany from the listing and reviewed 588 servicemembers' medical records to determine whether the medical records documented the vaccinations.

To determine whether servicemembers' visits to Army battalion aid stations were documented in the members' permanent medical records, we selected three battalion aid stations that deployed to Bosnia-Herzegovina during Operation Joint Endeavor and selected 50 entries from each battalion aid station's sign-in patient logs. We then reviewed the medical records of those servicemembers to determine whether the visits had been documented.

To ensure that we did not overlook any of the appropriate documentation in the medical records during our examinations, the unit medical staff reviewed all of those records in which we could not find required documentation and verified that our examination was accurate. We also discussed reasons for missing documentation in the medical records with officials at the responsible medical units in Germany for those units whose medical records we reviewed.

Appendix I
Scope and Methodology

We conducted our review from October 1996 to April 1997 in accordance with generally accepted government auditing standards.

Comments From the Department of Defense



HEALTH AFFAIRS

THE ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, D. C. 20301-1200

APR 21 1997

Mr. Mark E. Gebicke
Director, Military Operations and Capabilities Issues
National Security and International Affairs Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Gebicke:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report "Defense Health Care: Medical Surveillance: Improved Since Gulf War, But Mixed Results in Bosnia," dated March 27, 1997 (GAO Code 703176/OAS Case 1328). The DoD generally concurs with the report.

Overall, DoD found the report to be accurate. Based on lessons learned from the Gulf War experience, we recognized that substantial improvements in medical surveillance and record keeping were needed; some improvements in these areas were applied during the deployment to Bosnia. Furthermore, we have applied lessons from Bosnia to refine DoD policy for future medical surveillance during deployments. Health surveillance and protection of our forces is paramount. With the support of the Services, the Chairman of the Joint Chiefs of Staff, and the intelligence community, we are aggressively working to continue to make those improvements.

Detailed comments to the GAO recommendations are enclosed. The DoD appreciates the opportunity to comment on the GAO draft report.

Sincerely,

A handwritten signature in cursive script that reads "Edward D. Martin".

Edward D. Martin, M.D.
Acting Assistant Secretary of Defense

Enclosure:
As stated

DoD Response to GAO Report (GAO Code 703176/OSD Case 1328) 27 March 1997

RECOMMENDATION 1:

The GAO recommended that the Secretary of Defense direct the Assistant Secretary of Defense for Health Affairs, along with the Military Services, the Joint Chiefs of Staff, and the Unified Commands, as appropriate, to complete expeditiously and implement a DoD-wide policy on medical surveillance for all major deployments of U.S. forces, using lessons learned during Operation Joint Endeavor and the Gulf War. (p. 22/GAO Draft Report)

Now on p. 22.

DOD RESPONSE:

The DoD concurs and is in compliance with this recommendation. The DoD has prepared and coordinated throughout the Department of Defense, DoD Instruction "Implementation and Application of Joint Medical Surveillance for Deployments" and DoD Directive, "Joint Preventive Medicine Support of Military Operations." Implementation of both the DoDI and the DoDD has been a high priority for the Department and will be published and disseminated throughout the DoD in August 1997. In addition, the Joint Preventive Medicine Policy Group (JPMPG) has been chartered. This group will make recommendations addressing U.S. military deployment health promotion and disease prevention to the Assistant Secretary of Defense for Health Affairs (ASD/HA).

RECOMMENDATION 2:

The GAO recommended that the Secretary of Defense direct the Assistant Secretary of Defense for Health Affairs, along with the Military Services, the Joint Chiefs of Staff, and the Unified Commands, as appropriate to develop procedures to ensure that medical surveillance policies are implemented to include emphasizing: (a) the need for unit commanders to ensure that all service members receive the required medical assessments in a timely manner; and, (b) the need for medical personnel to maintain complete and accurate medical records. (p. 22/GAO Draft Report)

Now on p. 22.

DOD RESPONSE:

DoD concurs. The Joint Staff sent a message to all the Unified Commands dated 10 February 1997 on "Medical Surveillance and Force Protection." This message states:

- (1) A comprehensive medical surveillance program is a critical element of force protection. To ensure force readiness and sustainment, CINCs should incorporate medical surveillance into all deliberate and crisis action planning.
- (2) Our experiences in recent deployments have clearly demonstrated the need for and benefits offered by a proactive and comprehensive medical

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surveillance program. The program will encompass pre-deployment, during deployment and post-deployment actions that include:

- A. Monitoring environmental, epidemiological, and diverse stressors;
 - B. Assessing disease non-battle injury (DNBI) rates, stress induced casualties, and combat casualties, including those produced by chemical and biological and nuclear weapons; and,
 - C. Reinforcing command-directed and individual preventive countermeasures and the provision of optimal medical care during and after deployment.
- (3) DoDI (6490.AA) and DoDD (6490.BB) on joint medical surveillance have been under review and are currently in the final staffing phase. The DoDD and DoDI will establish and describe policy, prescribe procedures, and assign responsibility for joint medical surveillance.
- (4) Using lessons learned from Operation Desert Shield, CINCs have implemented various medical surveillance initiatives. Total force protection necessitates a standard base program that commanders can tailor to meet their needs.
- (5) Commands at all levels are responsible for planning, preparing and executing the medical surveillance program. Without command emphasis, the likelihood of success is greatly diminished.
- (6) CINC support of a medical surveillance program by integrating it into operation plans is vital. This effort will help maximize readiness while minimizing the impact of disease and non-battle injuries.

RECOMMENDATION 3:

The GAO recommended that the Secretary of Defense direct the Assistant Secretary of Defense for Health Affairs, along with the Military Services, the Joint Chiefs of Staff, and the Unified Commands, as appropriate to develop procedures for providing accurate and complete medical assessment information to the centralized database. (p.22/GAO Draft Report)

DOD RESPONSE:

The DoD concurs. As previously stated, the DoD has in coordination DoDI "Implementation and Application of Joint Medical Surveillance for Deployments" (referenced in DoD response to recommendation 1) which will be completed and

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distributed throughout DoD by August 1997. The Joint Staff published "Joint Staff Policy on Medical Surveillance and Force Protection" (referenced in DoD's response to Recommendation #2) on February 10, 1997. Finally, DoD sponsored a Joint Working Group on 7-8 January 1997 to standardize pre- and post-deployment questionnaires for medical surveillance to be used in deployments. These questionnaires have been approved as of 8 April 1997. Data entry results from questionnaires will be automated in order to enhance accuracy. This automation initiative is currently expected to be completed in June 1997.

To date, 57,554 completed questionnaires have been received from the Operation Joint Endeavor/Joint Guard, 9,297 from Operation Desert Focus, and questionnaires from Operation Fair Winds have begun to arrive for data entry.

RECOMMENDATION 4:

The GAO recommended that the Secretary of Defense direct the Deputy Under Secretary of Defense for Requirements and Resources to investigate the completeness of information in the Defense Manpower Data Center's personnel deployment database and take corrective actions to ensure that the deployment information is accurate for service members who deploy to the theater. (p. 23/GAO Draft Report)

DOD RESPONSE:

DoD concurs. DoD Health Affairs convened a Working Group comprised of Service Preventive Medicine consultants, Joint Staff representatives from personnel and medical, along with Service Personnel representatives on March 17, 1997. The purpose of the meeting was to identify master personnel database deficiencies, understand Service reporting mechanisms and to ensure the Personnel community understood the importance that the medical community places on medical surveillance activities. This meeting resulted in recommendations that are currently under evaluation by the attendees to enhance this reporting process. It is anticipated that the final recommendations will be turned over to the Joint Staff and to the Office of Under Secretary of Defense for Personnel and Readiness and the DMDC for resolution.

Major Contributors to This Report

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